DECLARATION UNDER 37 C.F.R. § 1.131
Examining Group 1617
Patent Application
Docket No. UTR-104
Serial No. 09/654357

AUG 2 7 2001
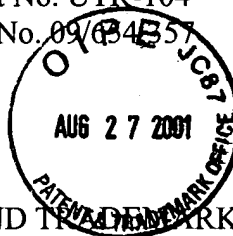
IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Examiner	:	Helen Nguyen
Art Unit	:	1615
Applicants	:	Michael B. Zemel, Hang Shi, Paula C. Zemel
Serial No.	:	09/654,357
Filed	:	September 1, 2000
For	:	Materials and Methods for the Treatment or Prevention of Obesity

Commissioner of Patents and Trademarks
Washington, D.C. 20231

DECLARATION UNDER 37 C.F.R. § 1.131

Sir:

DR. MICHAEL B. ZEMEL, DR. HANG SHI, AND DR. PAULA C. ZEMEL DECLARE:

1. THAT we are co-inventors of the invention disclosed and claimed in U.S. Application Serial No. 09/654,357.

2. THAT said invention was completed in the United States prior to January 2000, as shown by the following exhibits. We conceived and reduced to practice methods for the stimulation of lipolysis in animals by increasing the amounts of dietary calcium consumed by these animals. Dietary calcium is provided in the form of calcium carbonate or powdered non-fat milk. Exhibit 1 shows that increasing dietary calcium stimulates lipolysis. The effects of a high calcium diet on adipocyte lipolysis was assayed using a glycerol release assay as described in Example 2 of the above-identified patent application.

3.   THAT Exhibit 1 is a copy of pages taken from a laboratory record created and maintained in the normal course of laboratory operations, prior to January 2000. The completion date of the experiments and analyses recorded in these laboratory notebook pages have been redacted. We hereby attest that these redacted dates are prior to the critical date.

We hereby further declare that all statements made herein of our own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.
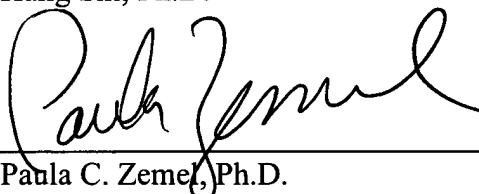
Further, Declarants sayeth not.

By:_____   Date:_____
      Michael B. Zemel, Ph.D.

By:_____   Date:_____
      Hang Shi, Ph.D.

By:_____   Date:___8-21-2001_____
      Paula C. Zemel, Ph.D.

PHOTOMETRY/GLYCL-H1

ID		mol/l		
STD 1	1.049	0.000		
STD 1	1.106	0.000		
MEAN=	.442	SD=	0.009	RSD= 0.483
STD 2	.45	1.000		
STD 2	.44	1.000		
MEAN=	12.44	SD=	0.009	RSD= 0.072
STD 3	3.060	2.500		
STD 3	3.097	2.500		
MEAN=	3.078	SD=	0.026	RSD= 0.844
STD 4	3.319	5.000		
STD 4	8.315	5.000		
MEAN=	8.317	SD=	0.002	RSD= 0.024

PHOT... H1/GLYCEROL

ID		mol/l		
STD 1	2.006	0.000		
STD 1	1.995	0.000		
MEAN=	2.000	SD=	0.007	RSD= 0.350
STD 2	2.988	0.050		
STD 2	3.001	0.050		
MEAN=	2.994	SD=	0.009	RSD= 0.300
STD 3	8.394	0.100		
STD 3	8.417	0.100		
MEAN=	3.405	SD=	0.016	RSD= 0.160
STD 4	10.77	0.250		
STD 4	10.75	0.250		
MEAN=	10.76	SD=	0.011	RSD= 0.130
STD 5	15.36	0.500		
STD 5	15.36	0.500		
MEAN=	15.36	SD=	0.000	RSD= 0.000
STD 6	15.44	1.000		
STD 6	15.15	1.000		
MEAN=	15.44	SD=	0.009	RSD= 0.058
1	4.773	0.074		
1	4.762	0.074		
1a MEAN=	0.074	SD=	0.000	RSD= 0.000
2	1.096	0.086		
2	1.070	0.085		
1b MEAN=	0.085	SD=	0.000	RSD= 0.000
3	6.028	0.143		
3	6.022	0.143		
2a MEAN=	0.143	SD=	0.000	RSD= 0.000
4	3.148	-0.016L		
4	3.175	-0.014L		
2b MEAN=	-0.015	SD=	0.001	RSD= -6.667
5	3.473	0.002		
5	3.479	0.003		
3b MEAN=	0.002	SD=	0.000	RSD= 0.000
6	5.089	0.092		
6	5.085	0.091		
4a MEAN=	0.091	SD=	0.000	RSD= 0.000
7	4.540	0.061		
7	4.530	0.061		

```
           6  5.085 091
4a MEAN=   0.091      SD=  0.000    RSD= 0.000
           7  4.540 0.061
           7  4.530 0.061
4b MEAN=   0.061      SD=  0.000    RSD= 0.000
           8  5.955 0.139
           8  5.933 0.138
5a MEAN=   0.138      SD=  0.000    RSD= 0.000
           9  5.967 0.140
           9  5.941 0.139
5b MEAN=   0.139      SD=  0.000    RSD= 0.000
          10  3.946 0.028
          10  3.929 0.028
6a MEAN=   0.028      SD=  0.000    RSD= 0.000
          11  2.255-0.065L
          11  2.259-0.065L
6b MEAN=  -0.065      SD=  0.000    RSD= 0.000
          12  5.853 0.134
          12  5.844 0.133
7a MEAN=   0.133      SD=  0.000    RSD= 0.000
          13  6.030 0.143
          13  6.004 0.142
7b MEAN=   0.142      SD=  0.000    RSD= 0.000
          14  4.075 0.036
          14  4.045 0.034
8a MEAN=   0.035      SD=  0.001    RSD= 2.857
          15  4.996 0.086
          15  4.993 0.086
8b MEAN=   0.086      SD=  0.000    RSD= 0.000
          16  3.785 0.020
          16  3.782 0.019
9a MEAN=   0.019      SD=  0.000    RSD= 0.000
          17  5.017 0.088
          17  5.020 0.088
9b MEAN=   0.088      SD=  0.000    RSD= 0.000
          18  5.373 0.107
          18  5.365 0.107
10a MEAN=  0.107      SD=  0.000    RSD= 0.000
          19  2.711-0.040L
          19  2.705-0.040L
10b MEAN= -0.040      SD=  0.000    RSD= 0.000
          20  4.237 0.045
          20  4.234 0.044
11a MEAN=  0.044      SD=  0.000    RSD= 0.000
          21  5.423 0.110
          21  6.055 0.145
11a MEAN=  0.127      SD=  0.024    RSD= 18.89
          22  6.032 0.144
          22  6.035 0.144
11a MEAN=  0.144      SD=  0.000    RSD= 0.000
          23  6.307 0.159
          23  6.277 0.157
12a MEAN=  0.158      SD=  0.001    RSD= 0.632
          24  8.206 0.264
          24  8.546 0.282
12b MEAN=  0.273      SD=  0.012    RSD= 4.395
          25  4.842 0.078
          25  4.841 0.078
13a MEAN=  0.078      SD=  0.000    RSD= 0.000
          26  4.835 0.073
          26  4.816 0.076
13b MEAN=  0.077      SD=  0.001    RSD= 1.298
          27  5.661 0.123
          27  5.822 0.132
14a MEAN=  0.127      SD=  0.006    RSD= 4.724
          28  2.061-0.076L
          28  2.028-0.077L
14b MEAN= -0.077      SD=  0.000    RSD= 0.000
          29  4.391 0.053
          29  4.857 0.051
15a MEAN=  0.052      SD=  0.001    RSD= 1.929
          30  5.045 0.089
          30  5.008 0.087
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21 = 22

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15a MEAN=   0.052    SD=   0.001   RSD= 1.923
      30   5.045 0.089
      30   5.008 0.087
15b MEAN=   0.088    SD=   0.001   RSD= 1.136
      31   2.682-0.041L
      31   2.659-0.043L
16a MEAN=  -0.042    SD=   0.001   RSD=-2.381
      32   5.409 0.109
      32   5.397 0.109
16b MEAN=   0.109    SD=   0.000   RSD= 0.000
      33   3.110-0.018L
      33   3.110-0.018L
1a MEAN=   -0.018    SD=   0.000   RSD= 0.000
      34   3.390-0.002L
      34   3.410-0.001L
1b MEAN=   -0.002    SD=   0.000   RSD= 0.000
      35   3.404-0.001L
      35   3.113-0.017L
2a MEAN=   -0.009    SD=   0.011   RSD=-122.2
      36   2.359-0.059L
      36   2.348-0.060L
2b MEAN=   -0.060    SD=   0.000   RSD= 0.000
      37   3.371-0.003L
      37   3.382-0.003L
3b MEAN=   -0.003    SD=   0.000   RSD= 0.000
      38   3.064-0.020L
      38   3.067-0.020L
4a MEAN=   -0.020    SD=   0.000   RSD= 0.000
      39   2.652-0.043L
      39   2.640-0.044L
4b MEAN=   -0.044    SD=   0.000   RSD= 0.000
      40   2.802-0.035L
      40   2.746-0.038L
5a MEAN=   -0.037    SD=   0.002   RSD=-5.406
      41   5.112 0.093
      41   4.785 0.075
5b MEAN=    0.084    SD=   0.012   RSD= 14.28
      42   5.600 0.120
      42   5.577 0.118
6a MEAN=    0.119    SD=   0.001   RSD= 0.840
      43   3.639 0.012
      43   3.652 0.012
6b MEAN=    0.012    SD=   0.000   RSD= 0.000
      44   5.071 0.091
      44   5.060 0.090
7a MEAN=    0.090    SD=   0.000   RSD= 0.000
      45   3.980 0.030
      45   3.985 0.031
7b MEAN=    0.030    SD=   0.000   RSD= 0.000
      46   4.219 0.044
      46   4.212 0.043
8a MEAN=    0.043    SD=   0.000   RSD= 0.000
      47   4.821 0.077
      47   4.792 0.075
8b MEAN=    0.076    SD=   0.001   RSD= 1.315
      48   4.956 0.084
      48   4.955 0.084
9a MEAN=    0.084    SD=   0.000   RSD= 0.000
      49   4.111 0.038
      49   4.082 0.036
9b MEAN=    0.037    SD=   0.001   RSD= 2.702
      50   4.999 0.087
      50   5.004 0.087
10a MEAN=   0.087    SD=   0.000   RSD= 0.000
      51   4.033 0.033
      51   4.046 0.034
10b MEAN=   0.033    SD=   0.000   RSD= 0.000
      52   4.807 0.076
      52   4.792 0.075
11a MEAN=   0.075    SD=   0.000   RSD= 0.000
      53   5.049 0.089
      53   5.044 0.089
```

```
        49  4.111 0.038
        49  4.082 0.036
9b MEAN=  0.037    SD=  0.001   SD= 2.702
        50  4.999 0.087
        50  5.004 0.087
10a MEAN=  0.087    SD=  0.000   RSD= 0.000
        51  4.033 0.033
        51  4.046 0.034
10b MEAN=  0.033    SD=  0.000   RSD= 0.000
        52  4.807 0.076
        52  4.792 0.075
11a MEAN=  0.075    SD=  0.000   RSD= 0.000
        53  5.049 0.089
        53  5.044 0.089
11b MEAN=  0.089    SD=  0.000   RSD= 0.000
        54  5.669 0.124
        54  5.674 0.124
12a MEAN=  0.124    SD=  0.000   RSD= 0.000
        55  5.830 0.132
        55  5.793 0.130
12b MEAN=  0.131    SD=  0.001   RSD= 0.763
        56  5.551 0.117
        56  5.523 0.115
13a MEAN=  0.116    SD=  0.001   RSD= 0.862
        57  3.558 0.007
        57  3.551 0.007
13b MEAN=  0.007    SD=  0.000   RSD= 0.000
        58  6.217 0.154
        58  6.194 0.153
14a MEAN=  0.153    SD=  0.000   RSD= 0.000
        59  1.984-0.080L
        59  1.982-0.080L
14b MEAN= -0.080    SD=  0.000   RSD= 0.000
        60  5.393 0.108
        60  5.395 0.108
15a MEAN=  0.108    SD=  0.000   RSD= 0.000
        61  5.425 0.110
        61  5.424 0.110
15b MEAN=  0.110    SD=  0.000   RSD= 0.000
        62  2.896-0.029L
        62  2.897-0.029L
16a MEAN= -0.029    SD=  0.000   RSD= 0.000
        63  5.112 0.093
        63  5.154 0.095
16b MEAN=  0.094    SD=  0.001   RSD= 1.063
        64  5.840 0.133
        64  5.849 0.133
1 MEAN=  0.133    SD=  0.000   RSD= 0.000
        65  5.858 0.134
        65  5.859 0.134
2 MEAN=  0.134    SD=  0.000   RSD= 0.000
        66  5.021 0.088
        66  5.011 0.087
3 MEAN=  0.087    SD=  0.000   RSD= 0.000
        67  5.401 0.109
        67  5.413 0.109
4 MEAN=  0.109    SD=  0.000   RSD= 0.000
        68  5.938 0.138
        68  5.860 0.134
5 MEAN=  0.136    SD=  0.002   RSD= 1.470
        69  5.449 0.111
        69  5.256 0.101
6 MEAN=  0.106    SD=  0.007   RSD= 6.603
        70  2.213-0.067L
        70  2.209-0.067L
7 MEAN= -0.067    SD=  0.000   RSD= 0.000
        71  5.759 0.129
        71  5.740 0.127
8 MEAN=  0.128    SD=  0.001   RSD= 0.781
```

| | 8 | 0.221 | 0.1988 | 1.11167 | |
| | | | | 0.947136 | |

ACTH(100nM)

con

1a	0.038	0.3977	0.095549	
1b	0.057	0.3636	0.156766	
2a	0.058	0.4902	0.118319	
2b		0.4441		
3b	0.056	0.3771	0.148502	
4a	0.035	0.5005	0.06993	
4b	0.006	0.5643		0.010633
avg			0.117813	

high-Ca

5a	0.017	0.4475		0.037989
5b	0.177	0.3302	0.536039	
6a	0.21	0.4576	0.458916	
6b	0.075	0.4078	0.183914	
7a	0.174	0.3832	0.454071	
7b	0.098	0.5349	0.183212	
8a	0.115	0.4088	0.281311	
8b	0.154	0.2215	0.69526	
avg			0.39896	

medium-dairy

9a	0.166	0.5304	0.312971	
9b	0.107	0.4747	0.225406	
10a	0.169	0.53	0.318868	
10b	0.103	0.5327	0.193355	
11a	0.155	0.3235	0.479134	
11b	0.172	0.3931	0.437548	
12a	0.216	0.2288	0.944056	
12b	0.226	0.2761	0.818544	
avg			0.466235	

high-dairy

13a	0.207	0.3945	0.524715	
13b	0.069	0.3999	0.172543	
14a	0.253	0.307	0.824104	
14b	0.237	0.2847	0.832455	
15a	0.196	0.2033	0.964092	
15b	0.198	0.3495	0.566524	
16a	0.023	0.4219		0.054515
16b	0.18	0.4152	0.433526	
avg			0.616851	